Influenza Pandemic Plan Guide for Healthcare Facilities

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Introduction

This Healthcare System Guide is intended to assist pandemic influenza planning efforts for medical provider organizations, health care systems, hospitals, long-term care facilities, community (home) health agencies, and other groups that will provide health care services as part of an influenza pandemic response.

Objectives:

- To promote and facilitate the development of written pandemic influenza preparedness and response plans by health care organizations, integrated with other emergency planning efforts.
- To promote and facilitate coordination and collaboration between state and local health departments and private health care organizations.
- To identify key health care preparedness issues and provide guidance on approaches to optimally address them in written preparedness and response plans.

Preparing for Pandemic Influenza

1. Getting started

Rationale:
Pandemic preparedness is not easy. Human resources are needed to write a plan, and some preventive measures require considerable investments in time and resources. To ensure that decision-makers are willing and able to make difficult choices before and during a pandemic is essential. The plan should be as facility-specific and as realistic as possible.

Questions to be addressed:
Is there recognition of the potential human, social, and economic impact of a pandemic at the highest levels of administration? Is there a clear strategy on how to deal with these issues?

Check:

□ The importance of influenza pandemic planning should be recognized at the appropriate levels of administration, and the aim of preparedness should be acknowledged.

□ Resources should be committed relative to the anticipated preparedness planning.

□ A realistic timeline for completion of the various stages of the plan should be established.

□ Identify individuals and representatives from appropriate areas that will produce and revise the plan. Participants may include representatives from administration, legal, medical staff, nursing, infection control, emergency

department, respiratory therapy, laboratory, occupational health, education and training, public relations, radiology, transportation, human resources, pharmacy, engineering, and environmental services personnel. The plan may be developed by existing multidisciplinary committees at the facility. Including representatives from state and local health departments and coordinating with other health care facilities are important to strengthen preparedness planning.

□ There must be agreement on the roles and responsibilities in the planning process from all participating individuals and groups.

2. Command and Control

Rationale:
In order to be able to make clear and timely decisions and to have a uniform policy that is endorsed by all, it is essential to know who is in charge of different activities, and how that might change if a limited outbreak becomes a declared state of emergency. In addition, it is essential to know who is in charge of key elements of response.

Questions to be addressed:
Who is making the decisions in the event of an influenza pandemic? What are the roles and responsibilities of federal, state, and local health agencies? Does everyone know what his/her role will be and what to do?

Check:

□ A command and control structure is in place outlining the management and decision-making process of all organizations involved in response to a health emergency and the role the particular facility will play.

□ Existing structures for emergency command and control should be optimally used and respected.

□ Everyone involved should know his/her role and responsibilities during a pandemic, including back-up individuals. This should be reflected in the operational plans of the facility.

3. Risk assessment

Rationale:
In order to better focus on the strategy, it is recommended that the expected impact of the pandemic be estimated for the particular facility. Influenza epidemics occur annually and usually peak between December and March in temperate regions in the Northern Hemisphere. In the United States (U.S.), annual influenza epidemics are associated with an average of 36,000 excess deaths and more than 110,000 excess hospitalizations. Health care demands are likely to increase substantially during a pandemic.

Based on previous pandemics, attack rates for influenza infection in a community during a pandemic are likely to be as high as 35% (i.e. one-third of the population is likely to become infected). Although influenza cases and deaths are likely to occur over a several month period throughout the U.S., within any community most of the impact is likely to occur within 4 to 8 weeks. Community-level estimates suggest that demand for inpatient and intensive care unit beds and for assisted ventilation may increase by more than 25% during a pandemic. This excess demand, in the context of a U.S. health care

system where trends have been toward a decreased number of admissions and hospital beds, will likely lead to critical shortages.

In addition to the increased overall need for health care services, morbidity and mortality patterns during a pandemic may differ substantially from those seen during non-pandemic years when older adults and persons with compromised immune systems primarily are at risk for serious disease and death. During the three pandemics of the 20th century, a substantial portion of the total mortality occurred among persons younger than 65 years who would not be considered at high risk during non-pandemic years. In such a setting, health care workers (HCWs) may be particularly vulnerable given their frequent occupational exposure. High rates of work absenteeism are likely to occur as HCWs become ill or need to care for ill family members. Thus, adequately staffed hospital beds may be larger limitation than bed availability alone.

The Centers for Disease Control and Prevention (CDC) FluSurge software is a spreadsheet-based model which provides hospitals and public health officials with estimates of the surge in demand for hospital-based services during an influenza pandemic. FluSurge does not provide estimates of personnel needs. FluSurge is available at http://www.cdc.gov/flu/references.htm.

Questions to be addressed:
How will an influenza pandemic impact services at the facility? What is the expected increase in emergency department visits, hospital admissions, and intensive care unit services? How many patients will need ventilatory support? What number of staff is necessary to maintain essential services?

Check:
- □ Conduct modeling studies on the impact of an influenza pandemic based on varying attack rates and patterns of attack. Impact measures can include the estimated number of HCWs, hospital admissions, deaths, intensive care unit admissions, and need for ventilatory support.
- □ An assessment of the economic impact to the facility may be helpful to justify the resources expended on preparedness efforts.
- □ Consider the potential interventions with antiviral medication and/or pandemic strain influenza vaccine in HCWs and the general public.

4. Communication

Rationale:
Communication strategies are an important component in managing any infectious disease outbreak, and are essential in the event of a pandemic. Accurate and timely information at all levels is critical in order to minimize unwanted and unforeseen disruption and economic consequences and to maximize the effective outcome of the response.

Questions to be addressed:
Is there a plan for communication with staff as well as the public? Is there an inventory of all available communication resources? What is the chain of responsibility, and who are the designated spokespersons?

Check:

Public Communication

□ Develop a communication plan that addresses different target groups that may be health care consumers at the facility. This might include the production of materials in languages appropriate for the community.

□ Develop a communication plan that addresses the needs of health care consumers at the time of the pandemic. This might include the worried well in the community.

□ Ensure that media messages are consistent with those of public health officials.

Staff Communication

□ Ensure a communication plan that addresses all staff at the facility.

□ Ensure a communication plan that addresses community providers who may care for patients at the facility.

□ Ensure a mechanism for the timely and consistent dissemination of information from state and federal agencies to the staff.

Communication with outside agencies/organizations

□ Ensure mechanisms for communication with local, state, and federal agencies that will play a role in response.

5. Legal and ethical issues

Rationale:

During a pandemic, it may be necessary to ration scarce medical resources. In addition, the facility may need to surge beyond licensed bed capacity, transfer patients to other facilities or alternate care sites. A facility may need to recruit volunteer health professionals who do not have privileges at the facility.

Questions to be addressed:

Are there policies and procedures for dealing with emergency credentialing and privileging of volunteer health professionals? Is there a clear understanding of how a declared state of emergency impacts on hospital operations? Is there a mechanism to deal with a potential need to ration scarce medical resources?

Check:

□ Address the issue of emergency credentialing and privileging of volunteer health professionals.

□ Ensure a mechanism to address ethical issues that may result from the need to allocate scarce medical resources. Bioethics committees might be asked to formally address this issue and should review the issue periodically.

□ Consider mandatory influenza vaccination of HCWs when vaccine becomes available, based on guidelines from public health officials.

6. Response plan by pandemic phase

Rationale:
To facilitate quick and adequate response during a crisis, all those concerned should know what to do and in what order. The World Health Organization has developed phases to help guide response planning for pandemic influenza. The phases are as follows:

- **Interpandemic/Postpandemic Period**
  - Phase 1
    No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk of human infection or disease is considered to be low.
  - Phase 2
    No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.

- **Pandemic Alert Period**
  - Phase 3
    Human infection(s) with a new subtype, but no human-to-human contact spread, or at most rare instances of spread to close contacts.
  - Phase 4
    Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well-adapted to humans.
  - Phase 5
    Larger cluster(s), but human-to-human spread is still localized, suggesting that the virus is becoming increasingly better-adapted to humans, but may not be fully transmissible (substantial pandemic risk).

- **Pandemic Period**
  - Phase 6
    Pandemic phase: increased and sustained transmission in general population.

Questions to be addressed:
Is there a response plan in place that identifies the responsibilities and tasks at varying stages of the pandemic?

Check:
□ Address the issues below for each pandemic period. The list is not comprehensive. The issues need not be discussed equally in each pandemic period.

Considerations	Interpandemic/ Postpandemic Period (Phase 1 and 2)	Pandemic Alert Period (Phase 3, 4, and 5)	Pandemic Period (Phase 6)
Decision making and coordination			
Surveillance and laboratory testing			
Triage of patients o Infection control issues			
Clinical evaluation of patients			
Human resources for patient care o Staffing ➢ Time-off policies ➢ Issues of childcare, eldercare, and staff absenteeism ➢ Use of staff not usually involved in patient care activities ➢ Use of volunteer health professionals ➢ Use of community volunteers ➢ Staffing related to non-traditional facilities			
Physical resources for patient care o Bed availability including intensive care o Equipment and supplies o Use of ancillary areas for patient care, e.g. hallways o Medical care at non-traditional facilities			
Education and training			
Influenza vaccination of staff			
Antiviral agents for staff			
Care of Deceased o Morgue capacity o Religious /cultural issues surrounding death o Issues surrounding autopsies o Infection control issues			
Mental health issues for patients and staff			
Business continuity			

Infection control ○ Standard and droplet precautions ○ Respiratory hygiene/cough etiquette ○ Staff education ○ Bed management ○ Patient transport ○ Cleaning, disinfection, and sterilization ○ Patient education ○ Visitation policy ○ Contact tracing ○ Health care workers with influenza-like illness ○ Elective utilization of healthcare facilities ○ Home health care ○ Outbreak control			

7. Implementation, testing, and revision of the plan

Rationale:
To ensure full implementation of the plan at all levels, it is important to set targets or define progress indicators that can be used to measure progress. A pandemic plan needs to remain a dynamic document to ensure that it is widely available and disseminated, even several years after implementation. This can only be achieved if the plan is tested and revised regularly.

Questions to be addressed:
Is there a mechanism in place to ensure that the plan is being implemented? How is the level of implementation being measured? Is the plan tested? Is there a system to ensure updating of the plan in the absence of a pandemic, and reviewing it after outbreaks of comparable diseases or threats such as SARS? Is there a method to ensure that the plan reflects existing federal, state, and local statutes, regulations and guidelines?

Check:
- □ Set targets, define indicators or develop a benchmark system that can be used to assess progress in implementation. Define who is responsible for supervision of the progress.
- □ Consider a table-top review of the preparedness and response plan, or carry out a simulation exercise, focusing on specific aspects of the response plan.
- □ Utilize or create opportunities to test components of the plan, e.g., during the regular influenza season especially as it relates to HCW vaccination.
- □ Revise the plan based on experience obtained during exercises or real-life events; ensure that changes are communicated to key stakeholders within and outside the facility.
- □ Revise the plan to reflect changes in federal, state, and local statutes, regulations and guidelines.

□ In the absence of a pandemic, define a period after which the plan will be revised.

Additional resources:

- *Influenza Pandemic Plan*, New Jersey Department of Health and Senior Services (NJDHSS) at www.state.nj.us/health/cd/influpandplan.pdf
- *Influenza Surge Capacity Guidance for General Hospitals*, NJDHSS at http://nj.gov/health/flu/documents/flu_scg_110904.pdf
- World Health Organization (WHO) Pandemic Preparedness available at www.who.int/csr/disease/influenza/pandemic/en
- Health and Human Services Pandemic Influenza Response and Preparedness Plan available at www.dhhs.gov/nvpo/pandemicplan